



Course Outline

2026-2027 Catalog

CSCI 49 - PCs and Peripherals/A+

Catalog Description

Transfer Status: CSU

Unit(s): 4.00

Lecture: 42.50 Contact hours/85.00 Out of class hours/127.50 Total hours/2.50 Unit(s)

Lab: 76.50 Contact hours/0.00 Out of class hours/76.50 Total hours/1.50 Unit(s)

Total: 119.00 Contact hours/85.00 Out of class hours/204.00 Total hours/4.00 Unit(s)

Course Description: This course provides an introduction to the computer hardware and software skills needed to help meet the growing demand for entry-level Information & Communication Technology (ICT) professionals. The fundamentals of computer hardware and software as well as advanced concepts such as security, networking, cloud computing, and the responsibilities of an ICT professional will be introduced. A special emphasis is placed on software, hardware, and network troubleshooting techniques. This course is intended to help students prepare for the CompTIA A+ certification exams. (C-ID ITIS 110).

Objectives

Upon successful completion of this course, the student should be able to:

1. Demonstrate baseline security skills for IT support professionals.
2. Configure device operating systems, including Windows, Mac, Linux, Chrome OS, Android and iOS and administer client-based as well as cloud-based (SaaS) software.
3. Troubleshoot and problem solve core service and support challenges while applying best practices for documentation, change management, and scripting.
4. Support basic IT infrastructure and networking.
5. Configure and support PC, mobile and IoT device hardware
6. Implement basic data backup and recovery methods and apply data storage and management best practices.

Course Content

Topic Titles / Suggested Time Topic

Lecture

<u>Topics</u>	<u>Lec Hrs</u>
Hardware	4.50
Networking	5.50
Mobile Devices	4.00
Operating Systems	6.00
Hardware and Network troubleshooting	5.50
Virtualization & Cloud Computing	4.00
Software Troubleshooting	4.00
Security	5.00
Operational Procedures	4.00
Total Hours:	
42.50	

Lab

<u>Topics</u>	<u>Lab Hrs</u>
Hardware	8.50
Networking	9.00
Mobile Devices	8.00
Operating Systems	9.00
Hardware & Network Troubleshooting	8.50
Virtualization & Cloud Computing	8.50
Software Troubleshooting	8.50
Security	8.50
Operational Procedures	8.00
Total Hours:	
76.50	

Methods of Instruction

- A. Demonstrations
- B. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- C. Lecture
- D. Multimedia Presentations

Methods of Evaluation

- A. Exams/Tests
- B. Homework
- C. Lab Projects
- D. Practical Evaluations
- E. Essays and research papers

Examples of Assignments

Reading Assignments

1. Read the procedure for installing an operating system on a new hard drive. Create a checklist form of the requirements for that installation. Include all of the configuration information. Be prepared to demonstrate the procedure and required steps in class on your lab computer.
2. Read the knowledge base (KB) article on upgrading to windows 11. Be prepared to explain in class the ramifications of that upgrade

Writing Assignments

1. Given a hypothetical office scenario, create a 5 page business proposal to purchase, implement and install the office infrastructure best suited to the business. It should include: a cover letter, detailed equipment list, custom built PCs, software, monitors, network hardware infrastructure, and topology (map), security, backup plan and a detailed invoice.
2. Complete a one page report on the wireless access points (WAP) lab. In your report, be sure to address security issues associated with WAPs, including the types of encryption available.

Out-of-Class Assignments

1. Research the various types of IT careers available locally. Find out what the average pay scale is and what additional skills or education/certifications are required to advance in that career. Be prepared to present your findings to the class.
2. Visit a local retailer of IT products. Survey the types and variety of devices being sold, and speak with a salesperson. Pay particular attention to the level of knowledge of the salesperson you speak with. Be prepared to present what you learn in class.

Recommended Materials of Instruction

Meyers, M. (2019). Mike Meyers' CompTIA A+ Guide to Managing and Troubleshooting PCs. *McGraw-Hill Education*, 6th. 9781260455069.

Wempen, F. & Holcombe, J. (2019). CompTIA A+ Certification Study Guide. *McGraw-Hill Education*, (Exams 220-1101 & 220-1102). 9781260456660.

Cisco Networking Academy. (2020). IT Essentials Companion Guide. *Cisco Press*, v7. 9780135645376.

Other Learning Materials

Required: Access to Cisco Networking Academy on-line content

Minimum Qualifications

Computer Service Technology
Computer Information Systems
Computer Science (Masters Required)

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Date: 05/02/2022